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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,686

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Jean-Marie Caupain

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LOWE HAUPTMAN & BERNER, LLP
1700 DIAGONAL ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

BUI PHO, PASCAL M

ART UNIT

PAPER NUMBER

2878

MAIL DATE

DELIVERY MODE

08/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,686	Applicant(s) CAUPAIN ET AL.	
	Examiner Pascal M. Bui-Pho	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/28/05, 08/18/06, 10/16/06</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the Examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --Beveled ergonomic image recorder with bent reading register--.

Claim Objections

4. Claim 13 is objected to because of the following informalities: on line 1, "whereinthere" should be changed to --wherein there--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 2, the limitation “that is to say” is ambiguous and unclear.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 9 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen et al. (US 6,794,654).

With regards to claim 9, Hansen et al. disclose in Figs. 1-5 an image sensor (generally depicted in Fig. 2) comprising: a matrix of rows and columns of photosensitive dots (detector array), made on a chip of general square or rectangular shape with beveled corners (generally depicted in Fig. 4), a reading register (bus structure) placed at the bottom of the matrix, said register being bent so as to run alongside the beveled corners of the chip forming a horizontal part and two oblique parts, and a structure (conductor tracks) for directing photosensitive charges

Art Unit: 2878

of columns terminating opposite the beveled corners to register stages situated in the oblique parts alongside the beveled corners.

With regards to claim 11, Hansen et al. disclose an image sensor wherein each row of the matrix comprises several electrodes extending in a linear strip and in that the ends of certain of these electrodes are bent so that, inside a column terminating on an oblique part of the register, the last electrode of the last row of this column extends parallel to the beveled corner, the electrodes which precede this electrode having shapes intermediate between an oblique strip shape and a horizontal strip shape so as to facilitate the transmission of charges under these electrodes from the column to the register (Column 6, lines 58-63; Figs. 1 and 2).

With regards to claim 12, Hansen et al. disclose an image sensor wherein the last electrode of the last row of the matrix extends continuously along the horizontal part and the oblique parts of the register (Column 6, lines 58-63; Figs. 1 and 2).

With regards to claim 13, Hansen et al. disclose an image sensor wherein there are provided several metallic conductors (conductor tracks) extending along the register and coming into contact locally with the various charge transfer electrodes constituting the rows of the matrix.

With regards to claim 14, Hansen et al. disclose an image sensor wherein the reading register (bus structure) possesses a central output, that is to say it is divided into two half-registers operating in opposite senses so as to bring the charges from the left half of the matrix to the right and the charges from the right half to the left (generally depicted in Fig. 2).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 6,794,654).

With regards to claim 10, Hansen et al. disclose in Figs. 1-5 an image sensor comprising, among other features, a structure (conductor tracks) for directing photosensitive charges of columns terminating opposite beveled corners to register stages situated in oblique parts alongside the beveled corners, but lack a clear disclosure of insulating zones between said columns. Selecting known available elements and/or components to transfer charge more efficiently would have been obvious to one of ordinary skill in the art. Accordingly, it would have been obvious to modify Hansen et al. by including insulating zones, as claimed, in order to reduce charge interference and hence, output sensing results of greater accuracy.

11. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 6,794,654) in view of Carroll (US 6,527,442).

With regards to claims 15 and 16, Hansen et al. disclose in Figs. 1-5 an image sensor in an X-ray detector system comprising, among other features, a matrix of rows and columns of photosensitive dots (detector array) made on a chip of general square or rectangular shape with beveled corners (generally depicted in Fig. 2), but lack a clear disclosure of said chip being covered with a scintillator and said image sensor being part of an intraoral dental radiological

image capture device. In an analogous imaging art, Carroll discloses in Figs. 1D and 3 an image sensor comprising, among other features, a matrix of rows and columns of photosensitive dots (13d, 31) made on a chip covered with a scintillator (13c), said image sensor being part of an intraoral dental radiological image capture device (Column 1, lines 16-44). Selecting a known available element to detect electromagnetic waves and a desired application of said image sensor would have been obvious to one of ordinary skill in the art. Accordingly, it would have been obvious to modify Hansen et al. by including a scintillator and using said sensor in an intraoral dental radiological image capture device, as taught by Carroll, in order to provide higher detection efficiency, hence facilitating dental diagnosis and/or examination.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714. The Examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 2878

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pascal M. Bui-Pho
Examiner, Art Unit 2878
30 July 2007

A handwritten signature in black ink, appearing to read "Georgia Epps", written in a cursive style.

Georgia Epps
Supervisory Patent Examiner
Technology Center 2800